



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

[Handwritten signature]

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/593,215	06/14/2000	Jari M. Heinonen	1999-0336 (STG162)	8321

34700 7590 08/24/2004

DOCKET CLERK
P.O. BOX 802432
DALLAS, TX 75380

EXAMINER

TRAN, PHUC H

ART UNIT PAPER NUMBER

2666

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/593,215

Applicant(s)

HEINONEN ET AL.

Examiner

PHUC H TRAN

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 5, 7-14 and 17-24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-3, and 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Ottosson et al. (U.S. Patent No. 6480558 B1).

- With respect to claim 1, Ottosson teaches a method of detecting a loss of synchronization between a transmitter and a receiver (e.g. the detecting between mobile and base station in Fig. 1) comprising:

evaluating a plurality of synchronization indicators to detect a loss of synchronization between a transmitter and a receiver in a wireless communication system (col. 6, lines 50-67; col. 19, lines 30-31).

- With respect to claims 2 and 16, Ottosson discloses wherein evaluating comprises:
determining loss of synchronization when a majority of the plurality of synchronization
indicators indicates the loss of synchronization (col. 4, lines 6-44).

- With respect to claim 3, Ottosson further comprises producing each of the plurality of
synchronization indicators by one of a plurality of synchronization detectors (e.g. detectors in
Fig. 4).

- With respect to claim 15, Ottosson teaches a receiver adapted to detect a loss of
synchronization between the receiver and a transmitter (e.g. the detecting between mobile and
base station in Fig. 1) comprising:

a plurality of synchronization detectors (block 415, 420, 425 in Fig. 4) adapted to detect a
loss of synchronization between a transmitter and the receiver (e.g. to detect cell loss in
transmitting) , each of the plurality of synchronization detectors producing a synchronization
indicator to provide a plurality of synchronization indicators (col. 9, lines 34-54);

and a controller (430 in Fig. 4) adapted to evaluate the plurality of synchronization
indicators to establish the loss of synchronization between the transmitter and the receiver (col.
9, lines 8-25).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ottosson et al. (U.S. Patent No. 6480558 B1) in further view of Bayley (U.S. Patent No. 6101173)

- With respect to claim 4, Ottosson discloses all the aspect of the claimed invention as set forth above but fails to teach wherein producing comprises: producing a guard band energy synchronization indicator based on the energy measured within a guard band. Bayley teaches the energy measure within the guard band (col. 4, lines 4-38) for synchronizing between the devices. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to implement the energy measure to determining the error in a transmission and synchronizing between two devices.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ottosson et al. (U.S. Patent No. 6480558 B1) in further view of Betts et al. (U.S. Patent No. 5610953)

- With respect to claim 6, Ottosson discloses all the aspect of the claimed invention as set forth above but fails to teach wherein the producing comprises: producing a phase-frequency synchronization indicator based on a phase frequency relationship of a plurality of pilot signals having different frequencies. Betts teaches the phase frequency (col. 3, lines 4-22) for synchronizing between the devices. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to implement the phase frequency to determining the error in a transmission and synchronizing between two devices.

Allowable Subject Matter

5. Claims 5, 7-14 and 17-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See form PTO-892.

In June 2004, the USPTO ceased mailing paper copies of cited U.S. patents and U.S. patent application publications with all Office actions. See "USPTO to Provide Electronic Access to Cited U.S. Patent References with Office Actions and Cease Supplying Paper Copies," 1282 O.G. 109 (May 18, 2004). Foreign patent documents and non-patent literature will continue to be provided to the applicant on paper.

All U.S. patents and U.S. patent application publications are available free of charge from the USPTO web site (www.uspto.gov/patft/index.html), for a fee from the Office of Public Records (<http://ebiz1.uspto.gov/oems25p/index.html>), and from commercial sources. Copies are also available at the Patent and Trademark Depository Libraries (PTDLs). A list of the PTDLs may be found on the USPTO web site (www.uspto.gov/web/offices/ac/ido/ptdl/ptdlib_1.html). Additionally, a new feature in the Office's Private Patent Application Information Retrieval system (PAIR), E-Patent Reference, is available for downloading and printing of U.S. patents and U.S. patent application publications cited in U.S. Office Actions.

STEPS TO USE THE E-PATENT REFERENCE FEATURE

Access to Private PAIR is required to utilize E-Patent Reference. If you do not already have access to Private PAIR, the Office urges practitioners and applicants not represented by a practitioner to: (1) obtain a no-cost USPTO Public Key Infrastructure (PKI) digital certificate; (2) obtain a USPTO customer number; (3) associate all of their pending and new application filings with their customer number; (4) install free software (supplied by the Office) required to access Private PAIR and the E-Patent Reference; and (5) make appropriate arrangements for Internet access.

Art Unit: 2666

Instructions for performing the 5 steps:

Step 1: Full instructions for obtaining a PKI digital certificate are available at the Office's Electronic Business Center (EBC) web page (www.uspto.gov/ebc/downloads.html). Note that a notarized signature will be required to obtain a digital certificate.

Step 2: To get a Customer Number, download and complete the Customer Number Request form, PTO-SB/125, from the USPTO web site (www.uspto.gov/web/forms/sb0125.pdf). The completed form can be transmitted by facsimile to the Patent Electronic Business Center at (703) 308-2840, or mailed to the address on the form. If you are a registered attorney or agent, your registration number must be associated with your customer number. This association is accomplished by adding your registration number to the Customer Number Request form.

Step 3: A description of associating a customer number with the correspondence address of an application is described at the EBC Web page (www.uspto.gov/ebc/registration_pair.html).

Step 4: The software for electronic filing is available for downloading at www.uspto.gov/ebc. Users can also contact the EFS Help Desk at (703) 305-3028 and request a copy of the software on compact disc. Users will also need Adobe Acrobat Reader, which is available through a link from the USPTO web site.

Step 5: Internet access will be required which applicants may obtain through a supplier of their own choice. As images of large documents must be downloaded, high-speed Internet access is recommended.

The E-Patent Reference feature is accessed using a button on the Private PAIR screen. Ordinarily all of the cited U.S. patent and U.S. patent application publication references will be available over the Internet using the Office's new E-Patent Reference feature. The size of the references to be downloaded will be displayed by E-Patent Reference so the download time can be estimated. Applicants and registered practitioners can select to download all of the references or any combination of cited references. Selected references will be downloaded as complete documents in Portable Document Format (PDF). The downloaded documents can be viewed and printed using commercially available software, such as ADOBE® READER®. ADOBE® READER® is available free of charge from Adobe Systems Incorporated (www.adobe.com/products/acrobat/readmain.html).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUC H TRAN whose telephone number is (703) 308-7471.

The examiner can normally be reached on M-F (8-4:30).

Art Unit: 2666

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RAO SEEMA can be reached on (703) 308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuc Tran
Assistant Examiner
Art Unit 2664

P.t
8/20/04

A handwritten signature in black ink, appearing to be 'Dang Ton', written in a cursive style.

DANG TON
PATENT EXAMINER